

Section II. (Amendments to the Claims)

Please amend claims 6, 8, 16, 22, 23, 30 and 35 as set out in the following listing of claims 1-35.

1. **(Original)** A *SGR* gene encoding a polypeptide comprising amino acid sequence having at least 60% homology with SGR domain I which is conserved amino acid sequence region of 49~207 among amino acid sequence of SEQ ID NO: 30, and inducing leaf yellowing by participating in chlorophyll catabolism during plant senescence.
2. **(Original)** The *SGR* gene according to claim 1, wherein the polypeptide comprises a chloroplast-targeting signal peptide sequence, SGR domain II, and/or SGR domain III which contains 2~6 conserved glutamines (Qs) in C-terminal region.
3. **(Original)** The *SGR* gene according to claim 1, wherein the polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NOs: 30 to 50 and 57.
4. **(Original)** The *SGR* gene according to claim 3, wherein the *SGR* gene comprises the DNA sequence selected from the group consisting of SEQ ID NOs: 1 to 21 and 28.
5. **(Original)** A polypeptide encoded by the *SGR* gene of claim 4.
6. **(Currently Amended)** A recombinant vector comprising the *SGR* gene of claim 1 ~~or claim 2~~.
7. **(Original)** A microorganism transformed with the recombinant vector of claim 6.
8. **(Currently Amended)** A plant transformed with the *SGR* gene of claim 1 ~~or claim 2~~.
9. **(Original)** A method for producing a stay-green mutant plant, which comprises mutating *SGR* gene of yellowing plants or fragments thereof.
10. **(Original)** The method according to claim 9, wherein the *SGR* gene encodes the polypeptide comprising amino acid sequence having at least 60% homology with SGR domain I which is

conserved amino acid sequence region of 49~207 among amino acid sequence of SEQ ID NO: 30.

11. **(Original)** The method according to claim 10, wherein the polypeptide comprises the chloroplast-targeting signal peptide sequence and SGR domain II, and/or SGR domain III which contains 2~6 conserved glutamines (Qs) in C-terminal region.

12. **(Original)** The method according to claim 10, wherein the *SGR* gene comprises the base sequence selected from the group consisting of SEQ ID NOs:1 to 21 and 28.

13. **(Original)** The method according to claim 9, wherein the *SGR* gene fragment comprises the DNA sequence selected from the group consisting of SEQ ID NOs: 21 to 29.

14. **(Original)** The method according to claim 9, wherein the mutating of *SGR* gene is carried out by deleting a part of base of said gene, substituting other singular or plural bases for a part of base of said gene, or adding other singular or plural bases to said gene.

15. **(Original)** The method according to claim 12, wherein A substitutes for the 295th base G in the *SGR* gene of SEQ ID NO:1.

16. **(Currently Amended)** A stay-green mutant plant produced by the method of ~~any one claim among claims 9 to 15.~~

17. **(Original)** A method for producing a stay-green mutant plant, which comprises suppressing the expression of the *SGR* gene in yellowing plant.

18. **(Original)** The method according to claim 17, wherein the *SGR* gene encodes the polypeptide comprising amino acid sequence having at least 60% homology with SGR domain I which is conserved amino acid sequence region of 49~207 among amino acid sequence of SEQ ID NO: 30.

19. **(Original)** The method according to claim 18, wherein the polypeptide comprises the

chloroplast-targeting signal peptide sequence and SGR domain II, and/or SGR domain III which contains 2~6 conserved glutamines (Qs) in C-terminal region.

20. **(Original)** The method according to claim 18, wherein the *SGR* gene comprises the base sequence selected from the group consisting of SEQ ID NOs:1 to 21 and 28.

21. **(Original)** The method according to claim 17, wherein suppressing the expression of the *SGR* gene is performed by gene silencing technique.

22. **(Currently Amended)** A stay-green mutant plant produced by the method of ~~any one claim among claims 17 to 21.~~

23. **(Currently Amended)** A method for producing a stay-green mutant plant, which ~~comprising~~ comprises the steps of:

- (a) obtaining a recombinant vector by introducing a *SGR* gene or a fragment thereof originated from target plant to be mutated, to T-DNA vector; and
- (b) transforming a wild type plant with the recombinant vector.

24. **(Original)** The method according to claim 23, wherein the *SGR* gene encodes the polypeptide comprising amino acid sequence having at least 60% homology with SGR domain I which is conserved amino acid sequence region of 49~207 among amino acid sequence of SEQ ID NO: 30.

25. **(Original)** The method according to claim 24, wherein the polypeptide comprises the chloroplast-targeting signal peptide sequence and SGR domain II, and/or SGR domain III which contains 2~6 conserved glutamines (Qs) in C-terminal region.

26. **(Original)** The method according to claim 24, wherein the *SGR* gene comprises the base sequence selected from the group consisting of SEQ ID NOs:1 to 21 and 28.

27. **(Original)** The method according to claim 23, wherein the *SGR* gene fragment comprises the DNA sequence selected from the group consisting of SEQ ID NOs: 21 to 29.

28. **(Original)** The method according to claim 23, wherein the T-DNA vector is a vector for RNAi which induces gene silencing by making the double-stranded RNA (dsRNA) in a transgenic plant.

29. **(Original)** The method according to claim 23, wherein the recombinant vector comprises CaMV35s promoter or senescence-enhanced promoter.

30. **(Currently Amended)** A stay-green mutant plant produced by the method of ~~any one claim among claims 23 to 29.~~

31. **(Original)** A method for producing a stay-green mutant plant, which comprises inactivating the protein encoded by the *SGR* gene in yellowing plant.

32. **(Original)** The method according to claim 31, wherein the *SGR* gene encodes the polypeptide comprising amino acid sequence having at least 60% homology with SGR domain I which is conserved amino acid sequence region of 49~207 among amino acid sequence of SEQ ID NO: 30.

33. **(Original)** The method according to claim 32, wherein the polypeptide comprises the chloroplast-targeting signal peptide sequence and SGR domain II, and/or SGR domain III which contains 2~6 conserved glutamines (Qs) in C-terminal region.

34. **(Original)** The method according to claim 32, wherein the *SGR* gene comprises the base sequence selected from the group consisting of SEQ ID NOs: 1 to 21 and 28.

35. **(Currently Amended)** A stay-green mutant plant produced by the method of ~~any one claim among claims 31 to 34.~~